Inhibition of Post-partum Lactation with Quinestrol

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OVER THE last two decades, there have been an increasing resort to bottle feeding in place of breast feeding. This has been especially obvious among urban mothers in the Malaysian Singapore region (Mills 1955, Dugdale 1970, Wong 1971). Inhibition of post-partum lactation can be achieved by various methods, namely varying doses of stilboestrol, analgesia and restriction of fluid, injection of hexoesterol, plentiful of water, Vitamin B6 and various practices that are used in the local communities. In general, the more successful ones are the use of hormones. In practice, stilboestrol in varying schedules are used for suppression of post-partum lactation. Because of the need of constant supervision, attempts have been made to suppress lactation with single dose hormones. Loke and Lean (1970) and Kuah (1975) have given single injection of ablation and found it to be highly effective. The aim of the present study is to determine the effectiveness of a single dose of *oral* long acting oestrogen, namely, quinestrol in the inhibition of post-partum lactation. This was compared with a placebo in a double blind trial.

Quinestrol is a 3-cyclo-pentyl ether of ethinyl oestradiol. Clinical studies have already shown it to be a potent, orally effective oestrogen with a long duration of action. This has been shown to be due to quinestrol being stored in body fat depots. The compound is well tolerated and has minimal gastrointestinal side effects. Extensive blood coagulation studies performed in patients receiving quinestrol did not reveal any significant alterations.

Materials and Methods:

A double blind trial of quinestrol with a placebo was conducted in 120 women who delivered vaginally at the University Hospital, Kuala Lumpur between April 1973 to September 1973 and who had expressed the desire not to breast feed. Patients with any complications associated with the pregnancy were excluded.

Identical capsules containing 4 mg. quinestrol and lactose were prepared. These capsules were coloured pink and a capsule was given within 6 hours of delivery. Patients were given these capsules in a random manner. A total of 60 patients received quinestrol while the remaining 60 patients were treated with placebo capsules containing lactose.

Daily records were kept of the condition of the breasts with regard to consistency, lactation and comfort. The character of the lochia, rate of involution and any side-effects were also noted. In addition to the clinical assessment, the mother was questioned about breast comfort. The patients stayed in hospital for a period of 5 – 7 days.

If increasing lactation became established or if severe breast engorgement or pain occurred the patient was commenced on a course of stilboestrol to suppress lactation.

In order to assess the results after discharge from hospital, these patients were advised to return to the post-natal clinic 6 weeks after delivery, when they were questioned on breast engorgement, pain, lactation, increase in lochial flow or any further treatment by a general practitioner after they had been discharged from hospital.

Results:

There were 60 patients who were given quinestrol and 60 patients who had the placebo. The results of the double blind trial were evaluated during the patients' stay in hospital as well as after discharge from the hospital.

The criteria for a successful result were absence of pain, lactation or engorgement. A satisfactory result was achieved if there was mild discomfort, mild engorgement or mild lactation which did not require the use of another lactation suppresant, namely, stilboestrol. If there was moderate to severe engorgement with pain and lactation, which necessitated the administration of stilboestrol, it was considered a failure.

The immediate results are as shown in Table 1. Lactation was successfully inhibited in 46 of 60 patients who had quinestrol while they were in hospital. A success rate of 76.7 percent. Satisfactory results were obtained in 6 of 60 patients (10 percent). Eight patients who were considered to have failed with quinestrol had to be given stilboestrol. In contrast, only 6 patients (10 percent) who were given the placebo had their lactation suppressed. However, in a large number of patients (51) who were on placebo, there was no suppression with the placebo and stilboestrol had it be administered.

Table I

Assessment of Effects of Quinestrol and Placebo

	Quinestrol	Placebo
Results/No. of Patients	60	60
Success	46*	6*
Satisfactory Result	6	3
Failures	8	51

*$p > 0.01 < 0.05$

After discharge from the hospital, the patienst were interviewed and assessed during their post-natal visit. If the patients had no pain, engorgement or lactation after discharge from hospital it was considered that suppression has been successful. A satisfactory result was obtained if there was slight engorgement or discomfort with slight lactation which did not require the use of stilboestrol. Those patients who needed a further course of stilboestrol after discharge from hospital because of engorgement, lactation or severe pain were classified as failures. The follow-up was assessed at the first post-natal visit at the end of the 6th post-partum week. The results are as shown in Table II.

Table II

Follow-up Results of Breast Suppression with Quinestrol, Placebo, Stilboestrol

	Quinestrol		Placebo	
	Immediate	Late	Immediate	Late
Success	32	31	4	4
Satisfactory	4	3	1	0
Failures (Had Stilboestrol)	5	—	30	2
Total of Patients	41		35	

Of the 60 patients who were on quinestrol alone only 41 patients returned for their post-natal follow-up. Of the 36 patients who had good and satisfactorily suppression with quinestrol, in the immediate post-partum period, only 2 (5.5 percent) needed a course of stilboestrol after discharge. These were considered late failures.

35 patients who had been given a placebo initially were seen in the post-natal clinic. Of the 4 patients who had immediate good result, none needed further suppresant in the late post-partum period. One patient who was considered to be satisfactorily suppressed during her hospital stay had increased breast engorgement and lactation and needed a course of stilboestrol. Of the 30 patients who lactation was not suppressed with the placebo and who had a late course of stilboestrol, two needed further suppression with stilboestrol.

Discussion:

The use of a simple oral dose of quinestrol in the inhibition of post-partum lactation has been described by Barbour and Barush (1968), Kuku (1968) and Ng and Lee (1972). Results of these studies have shown that quinestrol was highly effective (67 percent to 80 percent) and this has been confirmed in the present study where 86 percent successful suppression was achieved.

The single oral dose of quinestrol has been shown to be less frequently associated with rebound breast engorgement and withdrawal bleeding (Barbour and Baruah 1968, Ng & Lee 1972) 5.5 percent of the patients whose lactation were initially successfully suppressed with quinestrol had further milk leakage. This was contrasted to the two patients who had rebound breast engorgement with stilboestrol, giving an incidence of 6.6 percent (Table II). Lee (1971) showed that oral stilboestrol was associated with rebound breast engorgement in 65 percent of patients and with withdrawal vaginal

bleeding in 25 percent of patients. There seemed to be no adverse effect on the lochia or rate of involution of the uterus in the present study.

Also, stilboestrol administration seemed to be associated with a statistically higher incidence of puerperal thrombo-embolism in Western communities (Daniel, 1967). This risk seems to be greater with age and greater parity. Consideration should be given perhaps in with-holding this preparation in high risk patients. However, puerperal thrombo-embolism is known to be among Asians (Jones, 1964; Srivasata, 1964; Tinckler, 1964; Wong & Teoh, 1975). Of the 4 cases presented by Wong & Teoh (1975), two patients had puerperal inhibition of lactation with stilboestrol.

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